

Appl. No. 09/837,084
Amdt. dated December 19, 2003
Reply to June 19, 2003 Office Action

REMARKS/ARGUMENTS

Reconsideration and withdrawal of the outstanding rejections is requested. Upon entry of the amendment, claims 1 and 3-6, 8-13 and 15-20 will be pending in the application, and claims 1, 3-6, 8-13 and 15-20 will be amended to more clearly recite applicants' invention. Claims 7 and 14 are presently cancelled. Claim 2 was previously cancelled. No new matter has been added.

Claim 1 has been amended to more clearly recite applicants' invention. Amended claim 1 is directed to a flexible, thermoformable packaging film laminate including an outer layer comprising a biaxially oriented polyester film; a layer of ink on a surface of said outer layer; an adhesive layer adjacent said layer of ink; and a flexible, polyamide containing, coextruded film adhered to said adhesive layer, said flexible, polyamide containing, coextruded film including an exterior polyolefin layer opposite said biaxially oriented polyester film, wherein said polyolefin layer is an exterior surface layer of said laminate.

Support for the amendments to claim 1 is found throughout the specification. In particular, on page 4, in the Detailed Description of the Preferred Embodiment, applicant discloses that the multilayer film includes "a register printed, thermoformable package." Identification of film layers is recited in connection with the Brief Description of the Drawing of "a biaxially oriented polyester film layer, an ink layer, an adhesive layer and a sequence of layers formed from a flexible polyamide-containing coextrusion", and further throughout the specification. As clearly identified in Figure 1, the multilayer film comprising layers 10a through 13b includes an exterior polyolefin layer opposite the biaxially oriented polyester film

Appl. No. 09/837,084
Amdt. dated December 19, 2003
Reply to June 19, 2003 Office Action

(layer 16). Figure 1 and the description relating thereto provide further support for the additional amendments to claims 8, 9 and 20.

Section 112 Rejection

The Examiner has rejected claim 1 under 35 U.S.C. §112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The Examiner specifically stated "[A]n image positioned on a surface' is not supported by the specification.

WTD
Applicants' respectfully disagree, however, Applicants' have amended claim 1 to recite that a layer of ink is on a surface of a biaxially oriented polyester film. Such is clearly disclosed in Figure 1 as layer 15 and in the specification at page 4, first paragraph under the Detailed Description of the Preferred Embodiment ("biaxially oriented polyester (OPET) layer 16 is printed with suitable ink 15"). Further, at page 2, fourth paragraph, "printed indicia like decorations and text" are disclosed in connection with "printed package[s]" and "printed image[s]" that utilize "dimensionally stable film like biaxially oriented polyester." The § 112 rejection as to claim 1, as amended, is requested to be withdrawn.

Section 103 Rejections

The Examiner has rejected claims 1, 3-4, 6-11 and 13-18 under 35 U.S.C. §103(a) as being unpatentable over Ramesh (U.S. Patent No. 6,346,285) in view of Kobayashi et al. (U.S. Patent No. 5,643,659). The Examiner has rejected claims 5, 12, 19 and 20 as being unpatentable over Ramesh in view of Kobayashi et al. in further view of Kuriu et al. (U.S. Patent No. 5,562,996). Applicants respectfully submit that the claims, as amended herein,

Appl. No. 09/837,084
Amdt. dated December 19, 2003
Reply to June 19, 2003 Office Action

distinctly define the present invention from any of the art of record, taken alone or in combination, for the reasons that follow.

The Examiner has stated that:

Ramesh discloses a packaging film comprising a first layer of polyamide, a second layer of polyamide and a third layer which serves as an oxygen barrier layer (column 2, lines 16-54) where the oxygen barrier layer in the inner layer (column 15, lines 16-20). The reference further discloses a fourth outer layer comprising polyester (column 3, lines 23-32) where the multilayer film is biaxially oriented containing a layer of polyolefin (column 3, lines 25-39). Ramesh discloses an extruded film (column 4, lines 23-24) consisting of a blend of polyamide of semi-crystalline polyamide and an amorphous polyamide (column 14, lines 40-64). Ramesh discloses bonding the layers of the coextruded multilayer film together with adhesives (column 6, lines 24-32)....Ramesh does not disclose an image on the surface of the multilayered film...

Kobayashi teaches an image on the surface of a multilayer article having a protective layer film covering the image comprised of polyamide (column 5, lines 1-10)....It would have been obvious to one of ordinary skill in the art to include a printed image on the outer layer of Ramesh's film in order to identify the product of the packaged film and Kobayashi teaches the protective polyamide layer film to improve heat resistance and abrasion resistance.

(Office Action, pages 3-4).

It is well established that the Patent Office has the initial duty of supplying the factual basis for its rejection. See, *In re Warner & Warner*, 154 USPQ 173 (CCPA 1967). Numerous cases which have been decided by the Federal Circuit can be cited for the proposition that there must be a teaching or suggestion in the cited references to modify or combine them as suggested by the Examiner. See, for example, *Vandenberg v. Dairy Equipment Co.*, 224 USPQ 195 (Fed. Cir. 1984); *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 221 USPQ (Fed. Cir. 1984) ("teachings of references can be combined only if there is some suggestion or

Appl. No. 09/837,084
Amdt. dated December 19, 2003
Reply to June 19, 2003 Office Action

incentive to do so.”); *C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1352, 48 USPQ2d 1225, 1232 (Fed. Cir. 1998) (describing “teaching or suggestion or motivation [to combine]” as an “essential evidentiary component of an obviousness holding”); *In re Rouffet*, 149 F.3d 1350, 1359, 47 USPQ2d 1453, 1459 (Fed. Cir. 1998) (“the Board must identify specifically ... the reasons one of ordinary skill in the art would have been motivated to select the references and combine them”); *In re Fritch*, 972 F.2d 1260, 1265, 23 USPQ2d 1780, 1783, (Fed. Cir. 1992) (examiner can satisfy burden of obviousness in light of combination “only by showing some objective teaching [leading to the combination]”); *In re Fine*, 837 F.2d 1071, 1075, 5 USPQ2d 1596, 1600 (Fed. Cir. 1988) (evidence of teaching or suggestion “essential” to avoid hindsight).

Absent such a showing in the prior art, the Examiner has impermissibly used the applicant’s teaching to hunt through the prior art for the claimed elements and combine them as claimed. *In re Zurko*, 111 F.3d 887, 42 USPQ2d 1476 (Fed. Cir. 1997); *In re Vaeck*, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991). However, the Patent Office is prohibited from using Applicants’ disclosure as a “road map” to piece together elements from the prior art in order to render claims obvious. In *Orthopedic Equipment Co., Inc. v. U.S.*, 217 USPQ 193 (Fed. Cir. 1983), cautioning against the use of hindsight in answering the question of obviousness, the Federal Circuit stated at page 199:

The difficulty which attaches to all honest attempts to answer this question can be attributed to the strong temptation to rely on hindsight while undertaking this evaluation. It is wrong to use the patent in suit as a guide through the maze of prior art references, combining the right references in the right way so as to achieve the result of the claims in suit. Monday morning quarterbacking is quit improper when resolving the question of non-obviousness in a court of law.

Appl. No. 09/837,084
Amdt. dated December 19, 2003
Reply to June 19, 2003 Office Action

Also, see *American Imaging Services, Inc. v. Intergraph Corp.* (2,000 U.S. App. Lexus 13949) (Federal Circuit June 12, 2000) which holds that the showing of combinability must be unequivocal and cannot rest on broad conclusory statements about what the prior art suggests to one of ordinary skill in the art. There must be evidence that a skilled artisan, confronted with the same problems as the inventors (poor thermoformability of biaxially oriented polyester films) and with no knowledge of the claimed invention, would select the elements from the cited references for combination as claimed. *In re Rouffet*, 47 USPQ 1453, 1456 (Fed. Cir. 1998); *see also, In re Werner Kotzab*, 55 USPQ2d 1313, 1317 (Fed. Cir. 2000) (“[A] rejection cannot be predicated on the mere identification...of individual components of claimed limitations. Rather, particular findings must be made as to the reason the skilled artisan, with no knowledge of the claimed invention, would have selected these components for combination in the manner claimed.” [Emphasis added]).

As set forth in detail below, Applicants submit that the Examiner has failed to identify any particular guidance, suggestion or motivation within the cited references, either alone or in combination, to lead one of ordinary skill in the art to Applicants’ claimed invention. As such, it appears that the Examiner has impermissibly relied on hindsight reconstruction.

Applicant notes that claim 1 has been amended to recite a flexible, thermoformable packaging film laminate including: an outer layer comprising a biaxially oriented polyester film; a layer of ink on a surface of said outer layer; an adhesive layer adjacent said layer of ink; and flexible, polyamide containing, coextruded film adhered to said adhesive layer, said flexible, polyamide containing, coextruded film including an exterior polyolefin layer opposite said biaxially oriented polyester film, wherein said polyolefin layer is an exterior surface layer

Appl. No. 09/837,084
Amdt. dated December 19, 2003
Reply to June 19, 2003 Office Action

of said laminate. (Underlining reflecting current amendments). Claim 15 is amended similarly to recite a flexible, thermoformable packaging film laminate having at least three layers comprising: an outer layer comprising a biaxially oriented polyester film having an outer surface and an inner surface; an image layer of ink on said inner surface of said biaxially oriented polyester film; and, a flexible, polyamide containing, coextruded film adhered to said biaxially oriented polyester film, said flexible, polyamide containing, coextruded film comprising an exterior first polyolefin layer opposite said biaxially oriented polyester film, wherein said polyolefin layer is an exterior surface layer of said laminate. Claim 20 is also limited to a film construction having an exterior polyolefin layer (the "second polyolefin layer"). The claims of the present invention are directed to a multilayer film including (1) a biaxially oriented film adhesively laminated to (2) an unoriented polyamide containing coextruded film having an exterior polyolefin layer, thus substantially improving the thermoforming characteristics of the dimensionally stable oriented film. Applicants respectfully submit that the amended claims are patentably defined over Ramesh in view of Kobayashi et al. and further in view of Kuriu et al.

Ramesh '285

Applicants first note that the Examiner's primary reference, Ramesh, is directed to films having polyamide sealant layers (see Title; see also col. 2, line 54). Thus, Ramesh fails to disclose a multilayer film including an exterior polyolefin layer opposite a biaxially oriented polyester film as required by the presently amended claims. Additionally, the Examiner has relied upon the "fourth layer" recitation (Ramesh col. 3, lines 23-33) to find both an outer layer of polyester and a polyolefin. Such is an incorrect reading of the cited disclosure. If a polyester

Appl. No. 09/837,084
Amdt. dated December 19, 2003
Reply to June 19, 2003 Office Action

layer is selected from the "shotgun" listing of "fourth layer" polymers at col. 3, lines 23-32, as suggested by the Examiner, then all such films necessarily have a polyamide sealant as one exterior layer and a polyester layer as the other (and no polyolefin is present). If, however, a polyolefin is selected for the "fourth layer", then there is no polyester layer at all. There is nothing within the cited disclosure of Ramesh that suggests a film comprising a biaxially oriented polyester film adhesively laminated to an unoriented, flexible polyamide containing coextruded film according to the present claims. Thus, Ramesh fails to disclose or suggest the structure required by Applicants' claims.

The thermoforming process which uses Applicants' films subjects the film to thermal exposure (heat) to soften the film, which is then drawn or forced (elongated or stretched) into a shaped cavity or mold. Biaxially oriented polyester films have substantial resistance to the elongation required for thermoforming. The biaxial orientation process has already taken substantially all the "stretch" out of the film. As such, and noted by Ramesh, the exposure of biaxially oriented films to heat relieves the internal stress imparted by the biaxial orientation, causing them to shrink, not elongate, as required by a thermoformable film.

Ramesh, however, does not suggest thermoformable film laminates including *both* a biaxially oriented polyester film and an unoriented, polyamide containing coextruded film including an exterior polyolefin layer adhesively laminated thereto. Ramesh fails to suggest such a structure or that such a structure, as claimed by Applicants, would provide a substantial improvement in the thermoformability of the oriented polyester film. Also, shrink films are not useful for Applicants' purpose of thermoforming of the films. Specifically, a film that is rendered heat shrinkable by biaxially orienting the entire film is too highly oriented to be useful

Appl. No. 09/837,084
Amdt. dated December 19, 2003
Reply to June 19, 2003 Office Action

for making a package that is thermoformed to form the package as defined in Applicants' claims. The "stretch" required during thermoforming has already been taken out of fully-oriented, shrink films.

The claimed thermoformable films of the present invention are not fully-oriented (only the polyester layer is oriented) to become heat shrinkable. The claimed films comprise (a) a biaxially oriented polyester film and (b) an flexible polyamide containing coextruded film having an exterior polyolefin layer that has not been oriented, which are adhesively laminated together. As such, Applicants have found that, by adhesively laminating a flexible, polyamide containing, coextruded film having an exterior polyolefin layer, with a substantially non-thermoformable biaxially oriented polyester film, the thermoformability of the register-printable biaxially oriented polyester film is substantially improved. Thus, Applicants have disclosed a thermoformable multilayer film construction that extends the register printing benefits of dimensionally-stable, biaxially oriented polyester film into the thermoformed packaging field by substantially improving the thermoformability of such oriented film. A film construction according to Applicants claims, as amended herein, including a biaxially oriented polyester film adhesively laminated with an unoriented coextruded film, substantially improves the construction's thermoformability. The films of Ramesh comprise fully-oriented films, formed by a completely different process and utilized in a completely different way.

Ramesh is void of any reference to a film having **a portion** of which is biaxially oriented film, a layer of ink on the biaxially oriented film, and **another portion** comprising an thermoformable coextruded film adhesively laminated to the layer of ink, and having an exterior polyolefin layer. Conversely, Applicants claims are directed to a thermoformable

Appl. No. 09/837,084
Amdt. dated December 19, 2003
Reply to June 19, 2003 Office Action

laminate comprising (1) an oriented polyester printed film (OPET) and (2) athermoformable coextruded film that are adhesively laminated together. As such, Applicants have substantially improved the thermoformability of register printed packaging films comprising biaxially oriented polyester films (OPET) by adhesive-laminating the OPET films to thermoformable, flexible, polyamide-containing coextruded film. (See Specification, p. 3, "Summary of the Invention"). The resistance to elongation of biaxially oriented films, such as OPET, makes them especially difficult to thermoform into anything but very shallow cavities. Ramesh makes no reference to such problems or any suggestion or motivation to overcome such problems, either alone or in combination with the other cited references.

Additionally, Ramesh fails to disclose or suggest the inclusion of an internal layer of ink in the films thereof. The presently amended claims recite a layer of ink, which is disposed between a biaxially oriented polyester film and an adhesive layer that binds the biaxially oriented polyester film with a flexible polyamide containing coextruded film that has not been oriented. The present claims are further distinguished from the teaching of Ramesh by this limitation. There is no teaching, suggestion or motivation within Ramesh to overcome the lack of thermoformability of biaxially oriented polyester by adhesively laminating an thermoformable polyamide and exterior polyolefin containing coextruded film. In fact, Ramesh fails to make any mention of a desire to improve the thermoformability of register printable, biaxially oriented nylon film constructions.

Kobayashi et al. '659

The Examiner's secondary reference, Kobayashi et al., fails to supply the teaching, suggestion or motivation missing from Ramesh, either alone or in combination therewith. The

Appl. No. 09/837,084
Amdt. dated December 19, 2003
Reply to June 19, 2003 Office Action

Examiner suggests that Kobayashi et al. “teaches an image on the surface of a multilayer article having a protective layer film covering the image comprised of polyamide (column 5, lines 1-10)” and that “it would have been obvious to one of ordinary skill in the art to include a printed image on the outer layer of Ramesh’s film in order to identify the product[.]” (Office Action, page 4 (emphasis added)). However, the Examiner fails to provide citation to any teaching within Kobayashi et al. that supplies the teaching, suggestion or motivation to arrive at a thermoformable film construction including (a) a biaxially oriented polyester film, (b) a layer of ink on a surface of the biaxially oriented polyester film and (c) a thermoformable polyamide containing, and exterior polyolefin layer containing, coextrusion having an exterior polyolefin layer adhesively laminated to the ink layer, either alone or in combination with Ramesh.

First, Kobayashi et al. is directed to a heat transfer printing sheet for producing images having metallic luster for use with a heat transfer printer, and which do not require the use of a metal sputtering in its manufacture. Applicants respectfully submit such a reference is nonanalogous to Applicants’ claimed invention. The Kobayashi et al. reference is neither in the field of Applicants’ endeavor, nor pertinent to the particular problem with which the Applicants were concerned (improving the thermoformability of register-printable, biaxially oriented polyester film constructions). Applicants were faced with the problem of incorporating the register printing benefits of biaxially oriented polyester films, but extending that use into thermoformed packaging applications. Nothing in Kobayashi et al. relates to thermoforming, or the use of biaxially oriented films, and by no means suggests any solution to the problem encountered by Applicants. No one would logically considered the teaching of

Appl. No. 09/837,084
Amdt. dated December 19, 2003
Reply to June 19, 2003 Office Action

Kobayashi et al. (heat transfer printing of a lustrous metallic image), when faced with the task of improving the thermoformability of biaxially oriented polyester film.

Furthermore, Kobayashi et al. teach a heat transfer printing sheet, which is utilized to form (print) an image on another substrate. The heat transfer printing sheet comprises (a) a plastic film substrate, (b) a transparent coloring layer (pigment in wax or resin binder) on the plastic sheet, and (b) a metallic ink layer (metallic pigment in wax or resin binder) on the transparent coloring layer. In such a method, energy is applied image-wise to a heating device that contacts the heat transfer sheet to cause the *transfer* of the transparent coloring and metallic ink layers (in the shape of the energized image) to an image receiving sheet, such as paper to produce the image thereon. (See col. 1, lines 12-29). Once the heat transfer sheet is utilized, the substrate sheet of the heat transfer sheet is discarded. Kobayashi et al. do not disclose, suggest, motivate or even hint at thermoformable films or coextruded films, let alone thermoformable film laminates comprising (1) an OPET film, (2) an interior ink layer and which is (3) adhesively laminated to a thermoformable, coextruded film.

Even assuming *arguendo* that one would utilize the teaching of the nonanalogous Kobayashi et al. reference with Ramesh, the combined teachings of Ramesh in view of Kobayashi et al. would not lead one of skill in the art to Applicants' claimed invention. One would be lead to a fully-oriented heat-shrinkable film having a metallic image heat transferred on the *outer surface* thereof. There would be no direction to the laminates of the present claims having a biaxially oriented polyester layer, an internal layer of ink, and a thermoformable, flexible, polyamide containing coextrusion having an exterior polyolefin layer adhesively laminated thereto.

Appl. No. 09/837,084
Amdt. dated December 19, 2003
Reply to June 19, 2003 Office Action

Kuriu et al. '996

The Examiner's tertiary reference, Kuriu et al. U.S. Patent No. 5,562,996 is directed to multi-layer films having 1-4 polyamide layers made by T-slot coextrusion. It too is void of any discussion of adhesive laminating a thermoformable, coextruded polyamide containing film to a printed biaxially oriented film to improve the thermoformability of the biaxially oriented film. Nor is there any suggestion or motivation to do so, either alone or in combination with Ramesh and Kobayashi et al.. The films of Kuriu et al. are either fully-oriented (for heat-shrinkability) or fully-unoriented, but there is no suggestion or motivation to combine any films of Kuriu et al. with a biaxially oriented polyester film to improve the polyester film's thermoformability. The above discussion outlining the deficiencies of Ramesh and Kobayashi et al. apply equally here. There is no suggestion or motivation to adhesively laminate separate films, one a biaxially oriented polyester film and the other a thermoformable coextruded polyamide containing film with an exterior polyolefin layer to improve the thermoformability of the biaxially oriented polyester film. The teaching of Kuriu et al. does not fulfill the missing suggestion or motivation from Ramesh and Kobayashi.

In concluding that obviousness was established by the Ramesh and Kobayashi et al references, and further in view of Kuriu et al., the Examiner has not applied the principle that there must be something in the alleged art that would suggest the claimed invention to one having ordinary skill in the art. *See, Medtronic, Inc. v. Cardiac Pacemakers, Inc.*, 721 F.2d 1563, 1582, 220 U.S.P.Q. 97, 110 (Fed. Cir. 1983). As demonstrated above, there is no suggestion of the claimed invention in the cited references. In addition, it appears that the

Appl. No. 09/837,084
Amdt. dated December 19, 2003
Reply to June 19, 2003 Office Action

documents actually teach away from attempting to utilize a biaxially oriented polyester with an thermoformable polyamide containing coextruded film to substantially improve the thermoformability of the biaxially oriented film, because Ramesh and Kuriu et al. teach fully-oriented (each layer is oriented) heat-shrinkable films. Since the Ramesh and Kobayashi et al. references fail to teach, either alone or in combination, the elements defined in amended claims 1, 3-6, 8-13 and 15-20, the rejection thereto under 35 U.S.C. §103(a) has been overcome and should be withdrawn. Applicants showing of the lack of teaching, suggestion or motivation apply equally to the rejection of claims 5, 12 and 19-20 as obvious over Ramesh in view of Kobayashi et al. and further in view of Kuriu et al. (U.S. Pat. No. 5,562,996). Kuriu et al. fail s to supply the missing teaching, suggestion or motivation of Ramesh and Kobayashi et al. Applicants respectfully request that such rejections be withdrawn in light of the foregoing discussion.

Conclusion

In the present case, the Patent Office has provided no evidence within the cited references providing a suggestion or motivation to combine separate features from the films of Ramesh, in which all layers are biaxially oriented, with the heat transfer printing sheets of Kobayashi et al., which is void of any discussion of orientation or thermoformability, to arrive at Applicants' claimed combination of a printed biaxially oriented polyester film adhesively laminated to a thermoformable coextruded polyamide-containing film to improve the thermoformability of the biaxially oriented, printed film. Nor has the Patent Office shown evidence that such missing suggestion or motivation is provided by Kuriu et al. The Examiner has not shown what teachings of Ramesh, Kobayashi et al. or Kuriu et al. would suggest or

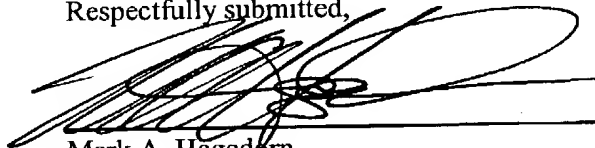
Appl. No. 09/837,084
Amdt. dated December 19, 2003
Reply to June 19, 2003 Office Action

motivate one skilled in the art to adhesively laminate a thermoformable coextruded polyamide containing film to a biaxially oriented polyester film to improve the thermoformability of the biaxially oriented polyester film. They do not. The Examiner has impermissibly used Applicants claimed combination to merely identify individual components in the cited references.

In view of the amendments and the foregoing discussion, Applicants respectfully submit that claims 1, 3-6, 8-13 and 15-20, as amended, are readily distinguishable over any of the cited references or any logical combination thereof. As such, Applicants submit that the presently pending claims are allowable and request that the rejections be withdrawn. If the Examiner has any questions regarding this response, the Examiner is invited to contact the undersigned.

December 19, 2003

Respectfully submitted,



Mark A. Hagedorn
Reg. No. 44,731
BARNES & THORNBURG
P.O. Box 2786
Chicago, Illinois 60690-2786
(312) 214-4808
(312) 759-5646 (fax)